

15. (Amended) The circuit of claim 14 wherein the processing circuitry comprises a setup engine that determines a bounding box for pixels manipulated by the instruction, wherein the bounding box contains all edges of a macroblock.

16. (Amended) The circuit of claim 14 wherein the processing circuitry comprises a windower having a first mode wherein pixels inside a triangle within a bounding box are processed, and a second mode wherein all pixels within the bounding box are processed.

Please cancel claims 17 and 18 without prejudice.

20. (Amended) An apparatus comprising:

a command stream controller coupled to receive an instruction to manipulate motion compensation video data;

a memory coupled to the command stream controller, the memory to store pixel data related to a macroblock in a first order, the first order is based on output from an Inverse Discrete Cosine Transform (IDCT) operation;

a read address generator coupled to the memory, the read address generator to cause the memory to output the pixel data related to a macroblock in a second order, the read address generator to cause the memory to output pixel data in sub-block-by-sub-block row major order; and

a processing unit coupled to the read address generator and to the command stream controller, the processing unit to perform motion compensation operations and texture mapping operations utilizing common circuitry.

Please cancel claims 21 and 25 without prejudice.

26. (New) A method comprising:

receiving an instruction to manipulate motion compensated video data with a command stream controller;

storing pixel data in a memory in a first order based on output from an Inverse Discrete Cosine Transform (IDCT) operation;

receiving a command to generate a reconstructed video frame; and

reading the pixel data out of the memory in a second order, wherein the second order comprises reading the pixel data sub-block-by-sub-block row major order.

27. (New) The method of claim 26 further comprising determining a bounding box for pixels manipulated by the instruction, wherein the bounding box contains all edges of a macroblock.

28. (New) The method of claim 27 further comprising processing the pixel data in triangular regions, wherein in a first mode pixels inside a triangle within a bounding box are processed, and in a second mode all pixels within the bounding box are processed.